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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,576	07/23/2003	Erland R. Sandstrom	2160-1B (FJ-99-361B)	7749
40256	7590	03/23/2005	EXAMINER	
FERRELLS, PLLC P. O. BOX 312 CLIFTON, VA 20124-1706			PATTERSON, MARC A	
			ART UNIT	PAPER NUMBER
			1772	

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/625,576	Applicant(s) SANDSTROM ET AL.	
	Examiner Marc A Patterson	Art Unit 1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 41-50, 57 and 58 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 41-50, 57 and 58 is/are rejected.
- 7) ☒ Claim(s) 41-50, 57 and 58 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/31/04</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

1. Claims 41 – 50 and 57 – 58 are objected to because of the following informalities: The property of biaxial toughness is claimed in Claim 41, but biaxial orientation is not disclosed, so that it is unclear how biaxial toughness is achieved, although it is stated in the specification on page 20 that the disclosed method has the salient feature of ‘biaxial induced toughness.’ For purposes of examination, biaxial toughness will be interpreted to be a feature of any polymeric article that is injection blow molded.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 41 – 50 and 57 – 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maxfield et al (WO 93/04118) in view of Willbrandt (U.S. Patent No. 5,769,266) and Aoki (U.S. Patent No. 4,101,618).

With regard Claim 41, Maxfield et al disclose a molded (page 37, lines 31 – 37) container (page 38, line 3), formed from a nanocomposite comprising a matrix polymer and a nanoparticle filler (platelets comprising a nanoscale filler; page 33, lines 1 – 26). Maxfield et al fails to disclose a container comprising a tumbler comprising a base forming the bottom of the tumbler defining an outer edge, a sidewall integrally formed with the base extending upwardly from the

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outer edge defining about its upper extremity a rim having a thickness greater than the adjacent portion of the sidewall, therefore fortified, and a container that is injection blow molded and exhibits biaxial toughness.

Willbrandt teaches a container comprising a tumbler (cup; column 3, lines 10 – 12) comprising a base forming the bottom of the tumbler (lower body portion; column 3, lines 25 – 28; Figure 1), therefore defining an outer edge, a sidewall integrally formed with the base extending upwardly from the outer edge (upper body portion; column 3, lines 43 – 45; Figure 1) defining about its upper extremity a rim (column 4, lines 44 – 47) having a thickness of 0.3 inch (column 4, lines 66 – 67), which is greater than the adjacent portion of the sidewall thickness of 0.04 inch (column 4, lines 17 – 19), which is molded (column 5, lines 11 – 15) for the purpose of obtaining a container that is capable of holding large quantities of beverage (column 1, lines 16 – 19). One of ordinary skill in the art would therefore have recognized the advantage of providing for the tumbler of Willbrandt in Maxfield et al, which is a molded container, depending on the desired beverage – holding capacity of the end product.

Aoki teaches that it is well known to make a container by injection blow molding (column 1, lines 21 – 23) for the purpose of obtaining a container having a cup shape (column 1, lines 23 – 27). One of ordinary skill in the art would therefore have recognized the advantage of providing for the injection blow molding of Aoki et al in Maxfield et al, which is a molded container, depending on the desired cup – like shape of the end product.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for a tumbler comprising a base forming the bottom of the tumbler defining an outer edge, a sidewall integrally formed with the base

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extending upwardly from the outer edge defining about its upper extremity a fortified rim having a thickness greater than the adjacent portion of the sidewall in Maxfield et al in order to obtain a container that is capable of holding large quantities of beverage as taught Willbrandt and to have provided for injection blow molding in Maxfield et al, therefore biaxial toughness, in order to obtain a container having a cup shape as taught Aoki.

With regard to Claim 42, the matrix resin disclosed by Maxfield et al is polypropylene (page 25, line 4).

With regard to Claims 43 and 46 – 48, the nanocomposite disclosed by Maxfield et al comprises from 0.05 to 20 percent by weight nanoparticles (page 22, lines 12 – 16).

With regard to Claims 44 and 49, the nanoparticles disclosed by Maxfield et al have an average size of less than 2 microns (50 Angstroms; page 2, lines 3 – 10).

With regard to Claims 45 and 50, the nanoparticles disclosed by Maxfield et al are clay particles (page 21, lines 3 – 7).

With regard to Claims 57 – 58, the matrix polymer disclosed by Maxfield et al is polycarbonate (page 22, lines 24 – 28) that is hydrolysis – stabilized (including as little water as possible to avoid hydrolytic cleavage; page 7, lines 8 – 11), and is therefore substantially hydrolytically stable over 10 wash cycles in alkaline environments. However, the claimed aspect of the polymer being substantially hydrolytically stable over 10 wash cycles in alkaline environments is directed to an intended use of the polymer, rather than a structural limitation, and is therefore given little patentable weight.

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4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc A Patterson whose telephone number is 571-272-1497.

The examiner can normally be reached on Mon - Fri 8:30 - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marc Patterson 3/18/05

Marc A. Patterson, PhD.

Examiner

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